NDIA - 29th Environmental and Energy Symposium & Exhibition

USAREUR Facilities Class I ODC Elimination Program

Integrating Class I ODC Elimination with Project Programming

ON POINT FOR THE NATION

BUCHART HORN GmbH

USAREUR Facilities Class I ODC Elimination Program

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USAREUR Facilities Class I ODC Elimination Program

DA Policy - Elimination of Class I ODCs at Army Installations

- Policy
  - Class I ODCs must be eliminated from all facilities on Army Installations by the end of FY 2003*
- Installation Commanders
  - Responsible for Class I ODC Elimination
- Tenant Commanders
  - Responsible for Complying with Installation Class I ODC Policies

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* As of 22 Nov 2002 Elimination of Class I ODC no longer required

USAREUR Facilities Class I ODC Elimination Program

Legal background

- Class I ODCs on USAREUR Installations are restricted by
  - US Federal Laws
  - Army Regulations
  - European Union Guidelines
  - Host Nation Laws

USAREUR Facilities Class I ODC Elimination Program

Legal background

- US-Public Law 102-484
- Final Governing Standards (FGS)
- European Regulations 3613/00 and 2037/00
- German “FCKW Halon-Verbots-Verordnung”

USAREUR Facilities Class I ODC Elimination Program

Background

- USAREUR, ODCSENGR – Environmental Branch
  - Develop plans and funding projects for the elimination of Ozone Depleting Chemicals (Class I ODCs) throughout Europe
- US Army Corps of Engineers, Europe District
  - Contracting Agent
  - Technical Review
- Buchart-Horn GmbH
  - Local Knowledge
  - Environmental Expertise

USAREUR Facilities Class I ODC Elimination Program

- Method
  - Single Task Order
  - USAREUR Wide
  - 3 Major Activities
    - Identification
    - Programming
    - Reporting

USAREUR Facilities Class I ODC Elimination Program

Requirements

- Investigate legal and regulatory background
- Identify Class I ODC containing equipment
- Determine replacement & retrofitting projects
- Estimate replacement removal costs
- Prioritize equipment and prepare plans
- Enter Class I ODC replacement projects into EPR
- Prepare EPR Roll-up files
- Submit Class I ODC Elimination Plans

USAREUR Facilities Class I ODC Elimination Program

Identify Class I ODC Equipment

- The program execution included a prototype phase
  - Prototype phase tested
    - initial standards
    - procedures
  - Prototype phase allowed the Government Working Group to refine the methodology

USAREUR Facilities Class I ODC Elimination Program

Identify Class I ODC Equipment

- 21 Base Support Battalions (BSB)
- 120+ Installations
  - Germany
  - Belgium
  - Netherlands
  - Italy

USAREUR Facilities Class I ODC Elimination Program

Identify Class I ODC Equipment

- Inspection
  - Physical inspection
  - Existing record review
- Simultaneous Visits by Survey Teams at each BSBs
- Approximately 1 week per BSB

USAREUR Facilities Class I ODC Elimination Program

Identify Class I ODC Equipment

- Typical equipment
  - Refrigeration
  - Air Conditioning
  - Fire Extinguishing Units

USAREUR Facilities Class I ODC Elimination Program

Identify Class I ODC Equipment

- What was found
  - 2900+/- pieces of Class I ODC containing equipment
  - Containing more than 3400 kg (7480 lbs) Class I ODCs

USAREUR Facilities Class I ODC Elimination Program

Typical Equipment

Cooling Unit

Walk-in Fridge

USAREUR Facilities Class I ODC Elimination Program

Typical Equipment

6 Door Refrigerator

Cooling Unit

USAREUR Facilities Class I ODC Elimination Program

Project Programming

- Equipment assessment:
  - Review of maintenance records
    - Maintenance History
    - Leak Rate
    - Class I ODC Refill
    - Other
  - Visible inspection of the units

USAREUR Facilities Class I ODC Elimination Program

Project Programming

- Equipment Condition Assessment Categories
  - Out of operation
  - Poor
  - Average
  - Good

USAREUR Facilities Class I ODC Elimination Program

Project Programming

- Out of operation
  - Replaced
  - Removed
- Poor Condition
  - Retrofitted
- 150 pieces of equipment were replaced or retrofitted

USAREUR Facilities Class I ODC Elimination Program

Project Programming

- Cost Estimating
  - Each piece of equipment
  - Market Research/Current Prices
  - Local Currency

USAREUR Facilities Class I ODC Elimination Program

Project Programming

- Enter Projects into EPR
- Prepare EPR Roll-up files
- Data entry
  - Project information
  - Narrative description
  - Regulatory information

USAREUR Facilities Class I ODC Elimination Program

Reporting

- Elimination Plans each ASGs/BSBs
- Elimination plan contains clear guidance for Class I ODC elimination
  - Responsibilities
  - Procedures
  - Resources
  - requirements
- Developed for use as follow up tool to track Class I ODC elimination

USAREUR Facilities Class I ODC Elimination Program

Reporting

- Elimination Plans consist of 7 Chapters:
  - Information about the Installation
  - Elimination Team
  - Inventory
  - Rules and Regulations
  - Recovery and Turn in
  - Responsibilities
  - Funding Resources

USAREUR Facilities Class I ODC Elimination Program

Summary

- USAREUR, ODCSENGR successfully conducted an integrated Class I ODC inventory and elimination program at 21 BSBs in 4 Countries
- Identification, planning and programming activities were combined into a single task order resulting in
  - Rapid Execution
  - Consistency in Reporting/Procedures
  - Solid Basis for Class II survey and Class I resurvey

USAREUR Facilities Class I ODC Elimination Program

Future Outlook - USAREUR

- Class II ODC Elimination Program
- Verify Progress of Class I Elimination Program

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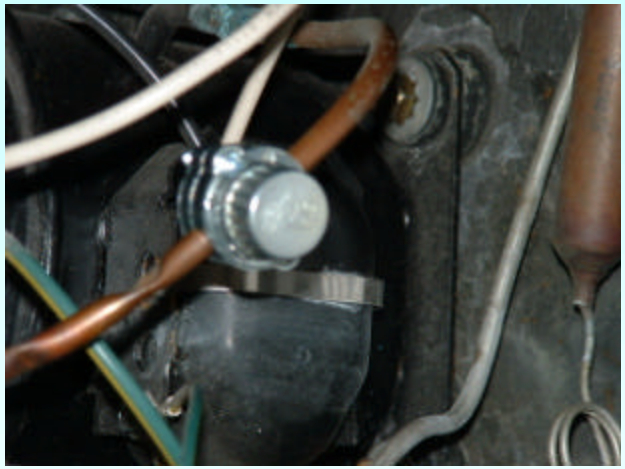
USAREUR Facilities Class I ODC Elimination Program

Retrofitting Work Sequence of Activities

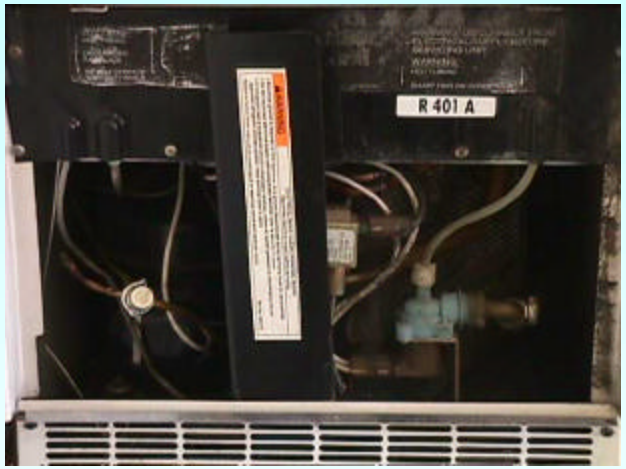
- A valve is attached to the flow tube. Valve remains in place for future use.
- R 12, or R 502 is pumped from the reservoir.
- Oil is removed from the reservoir and filter.
- New oil is installed according to the freon selected.
- Close off oil system and low pressure pump for final refrigerant evacuation.
- The cooling system is then cleaned and dried.
- New freon (R 401a, or R402a) is pumped in.
- Standard practice is to fill the gases removed from the refrigeration unit tanks into separate cylinders. Once full, these cylinders are transported to an incineration facility for destruction.

USAREUR Facilities Class I ODC Elimination Program

Retrofitting Work Sequence of Activities



Typical valve



Typical valve & label

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Retrofitting Work Sequence of Activities

Pump Equipment set up

Pumping ODC to cylinder

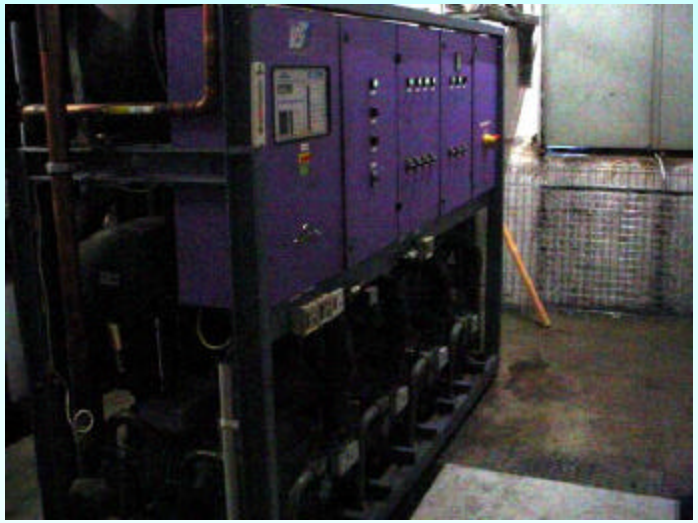
USAREUR Facilities Class I ODC Elimination Program

Retrofitting Work Sequence of Activities

Refill unit w/new refrigerant

USAREUR Facilities Class I ODC Elimination Program

Typical Equipment



Centralized cooling facility

Cooling Room